

## ONE OPEN POSITION (EPFL, SWITZERLAND) FOR A MATERIALS SCIENCE RESEARCHER/SOFTWARE ENGINEER

### DEVELOPING OPEN SOFTWARE SERVICES FOR TEACHING AND RESEARCH

**OSSCAR** (<https://www.oss-car.org>) has been recently funded by the EPFL Open Science Fund to create a web platform providing a collaborative environment for teaching and research, targeting dissemination of Open Science good practices. It is a joint project of the CECAM and MARVEL Centres.

Successful candidates will substantially contribute to develop the OSSCAR platform by implementing a number of tools to be used by professors and researchers in the EPFL community and beyond in the domain of atomistic simulations.

Tasks associated with this position over the three-year funding period are:

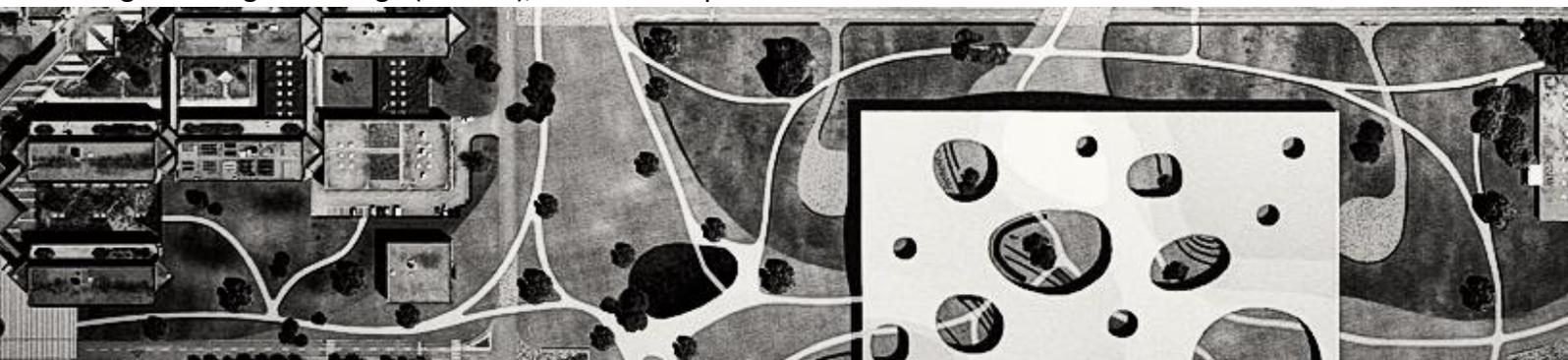
- **collecting usecases and user needs** to identify priorities and relevant educational and research apps;
- creating, in collaboration with researchers and teachers, **novel educational material and research tools**;
- **implementing widgets, tools and services** specific to the atomistic simulation domain that will be used in courses at EPFL and in the CECAM network, in interaction with the developers of the MARVEL Open Science Platform (targeting in particular integration with the AiiDA simulation platform and the Materials Cloud web portal);
- deploying a **platform to collect contributed code and tools**, that centralizes the information, facilitates development, deployment and use, and contains appropriate documentation;
- **co-organizing training and knowledge transfer events** (typically one per year) in collaboration with CECAM and MARVEL.

The position will allow the candidate to acquire and strengthen her/his skills in a number of industry-standard technologies for data analysis, web development and deployment (jupyter, machine-learning libraries, REST APIs, visualization frameworks such as d3.js/bokeh/plot.ly dash, docker, ansible, Open-Stack, kubernetes, ...).

The contract is initially for 1 year, as required by EPFL regulations, and renewable yearly upon mutual satisfaction. Level of employment will be 100% on the standard EPFL paygrade (for instance, a gross salary of 81'900CHF/year for a recently-graduated PhD). Funding is available for up to 3 years.

## WORK ENVIRONMENT

The selected candidate will be hosted at the École Polytechnique Fédérale de Lausanne (EPFL), located in Switzerland on the shores of Lake Geneva and in close proximity to the Swiss and French Alps, and will be jointly affiliated with the groups of Prof. Nicola Marzari (THEOS group and MARVEL) and Prof. Ignacio Pagonabarraga (CECAM), under the supervision of Dr. Giovanni Pizzi and Dr. Sara Bonella.



These multidisciplinary groups are at the forefront of development and application of molecular and materials simulations. In particular:

- MARVEL is a 12-year federal initiative created in 2014 whose aim is to accelerate materials' design and discovery;
- CECAM, created in 1969, is the longest-standing European institute for the advancement of methods in atomistic and molecular simulations.

In addition, the groups are involved in several international projects, including the H2020 E-CAM and MaX Centres of Excellence for computing applications, the swissuniversities P-5 Materials Cloud project, the ETN project ActiveMatter, H2020 MarketPlace, H2020 Intersect, the European Materials Modelling Council (EMMC) coordination-and-support action, the simulation services for the Nanoscience Foundries and Fine Analysis (NFFA), and the Graphene Flagship, together with further national, industrial, and computational projects.

## SELECTION CRITERIA

### Requirements:

- A **background in the physical sciences (physics, chemistry, and materials science/engineering)**. Candidates with a different academic background who can nevertheless demonstrate suitable experience are also encouraged to apply
- Advanced knowledge of Python
- Strong organisational skills, including the ability to work independently, to assess priorities and to manage projects involving multiple partners

### Desirable skills:

- A PhD in the domain is valuable (but not required)
- Web development experience (HTML5, CSS, JavaScript)
- Familiarity with version control systems (git), issue trackers and writing unit tests
- Experience with managing software projects in a team

## APPLICATIONS

Candidates should submit two PDF documents: 1) a full CV, including contacts for at least two references and 2) a cover letter of intent. The documents should be emailed to [giovanni.pizzi@epfl.ch](mailto:giovanni.pizzi@epfl.ch) and [sara.bonella@epfl.ch](mailto:sara.bonella@epfl.ch) (simultaneously; not two emails) with the exact text "OSSCAR Materials Science Researcher/Software Engineer" in the subject line. Shortlisted candidates will be contacted individually for initial interviews, first over Skype video conferencing. For best consideration, applications should be submitted by **Apr 28<sup>th</sup>, 2019**; the position will remain open until a suitable candidate has been found.

